WHAT IS CLAIMED IS:

- 1. A method of producing a precious metal nanoparticle in a plant comprising:
 - (a) selecting a plant growth environment comprising a precious metal source;
 - (b) growing a plant in said plant growth environment; and
 - (c) isolating said precious metal nanoparticle.
- 2. The method of claim 1, wherein said precious metal is gold.
- The method of claim 1, wherein said precious metal is silver.
- 4. The method of claim 1, wherein said precious metal is platinum.
- 5. The method of claim 1, wherein said plant is a dicot.
- 6. The method of claim 5, wherein said dicot is of the division Magnoliophyta.
- 7. The method of claim 6, wherein said dicot is alfalfa.
- 8. The method of claim 1, wherein isolating comprises isolating a part of said plant.
- 9. The method of claim 8, wherein said plant part is a leaf, a stem, or a root.
- 10. The method of claim 9, further comprising disrupting said plant part by physical, chemical or biological methods.
- 11. The method of claim 10, wherein the physical methods comprise pressing, grinding, sonication or burning.

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- 12. The method of claim 10, wherein the chemical methods comprise digestion or extraction.
- 13. The method of claim 10, wherein the biological methods comprise enzymatic degradation or microbial degradation.
- 14. The method of claim 8, wherein isolating comprises one or more of chromatography, centrifugation or electrophoresis.
- 15. The method of claim 1, wherein growing comprises planting a seed, a sprout of said plant, or said plant.
- 16. The method of claim 1, further comprising creating said plant growth environment comprising a precious metal source.
- 17. The method of claim 16, wherein said plant growth environment is soil or liquid.
- 18. The method of claim 17, wherein creating said plant growth environment comprises seeding a solid growth medium with a precious metal.
- 19. The method of claim 18, wherein said solid growth medium is soil or agar.
- 20. The method of claim 17, wherein creating said plant growth environment comprises mixing a precious metal with a liquid.
- 21. The method of claim 16, wherein creating said plant growth environment comprises:
 - (i) selecting an desired particle size; and
 - (ii) adjusting the precious metal concentration to produce said desire particle size.

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22.	The n	nethod of claim 2, wherein said nanoparticles have one or more of the	
	follow	ing characteristics:	
	(i)	crystalline;	
	(ii)	size of between about 2 nm and about 40 nm;	
	(iii)	twinned structure;	
	(iv)	icosahedral structure;	
	(v)	zero valence.	
23.	The method of claim 3, wherein said nanoparticles have one or more of the		
	following characteristics:		
	(i)	crystalline;	
	(ii)	size of between about 2 nm and 20 nm;	
	(iii)	icosahedral structure;	
	(iv)	dimeric, multimeric or wired;	
	(v)	zero valence.	